

II. CLAIM AMENDMENTS

1. (Currently amended) A system comprising a plurality of connected modules and providing data communication between the connected modules, wherein individual ones of said modules are operative-configured to transmit to and receive from one another of said modules a data package carrying a message,

wherein an individual one of the modules includes a generator of a data link layer and a generator of a physical layer for encapsulating the message,

wherein said data package is a block of data or a data packet or a datagram, the data package being composed of a sequence of bits arranged in fields, the fields being disposed in a plurality of layers constituting a layered structure, comprising:

a physical layer having a first segment and a second segment encapsulating other ones of the layers in said layered structure, the physical layer being provided by a physical layer generator in one of said modules and serving to convey a bit stream through a network of said modules,

a data link layer comprising a data link layer control section for carrying data link layer control data and a data section for carrying data for said other layers, the data link layer being provided by a data-link layer generator in said one module and being enclosed by the segments of said physical layer, and

a transport layer enclosed by the data link layer, the transport layer being provided by a transport layer router in said one module and having a connection number field for identifying an object communicating via said router within said module,

the transport layer defining a message in said data section, which message is configured according to a transport layer protocol and comprises:

a payload and a first header field for format of said payload,

a second header field for start of said payload in said message,

a third header field for length of said message,

a fourth header field for version of said transport layer protocol,

a fifth header field for message group identity establishing receiving resource format of said payload,

a sixth header field providing a message identity,

a seventh header field for identifying an object in the module, and

an eighth header field for sequencing a message relative to other messages.

2. (Currently amended) A system according to claim 1, wherein individual ones of said modules comprise a mobile communication device such as from one of a cell, mobile or satellite telephone, a personal digital assistant, or a peripheral thereto of a cell, a peripheral of a mobile or satellite telephone, or a peripheral of a personal digital assistant.

3. (Previously presented) A system according to claim 1, wherein individual ones of said modules comprise one or more objects, in addition to said object of said one module, communicating said message with one another; and said individual modules further comprise a data link layer generator and physical layer generator, in addition to said-

data link layer generator and said physical layer generator of said one module, adapted to encapsulate said message according to a data link layer protocol and to a physical layer protocol, respectively.

4-6. (Canceled)

7. (Previously presented) A system according to claim 1, wherein said data link control data comprises a checksum field following said message.

8. (Previously presented) A system according to claim 1, wherein said first segment of said physical layer comprises a media field for defining media, across which the data package is transferred.

9. (Previously presented) A system according to claim 1, wherein said first segment further comprises a synchronization field for synchronizing the receiving module with the transmitting module.

10. (Previously presented) A system according to claim 1, wherein said second segment of the physical layer comprises an index byte for providing the receiving module with information regarding segmentation or partitioning of data contained in a message.

11. (Previously presented) A system according to claim 1, wherein said second segment further comprises a sequence and acknowledge field for providing a receiving module with information whether said data package is an acknowledgement message or an ordinary message.

12. (Previously presented) A system according to claim 1, wherein said second segment further comprises a sequence and an acknowledge field, and is adapted to inform whether an error was identified in the received data package, when said data package is an acknowledgement message.
13. (Previously presented) A system according to claim 11, wherein said sequence and acknowledgement field is further adapted to inform a receiving module that a sequence number in said receiving module should be reset.
14. (Previously presented) A system according to claim 11, wherein said sequence and acknowledgement field is adapted to recognise acknowledgement messages and detect missing data packages.
15. (Previously presented) A system according to claim 1, wherein said second segment further comprises a fill field for ensuring that all data packages sent over said port connector contain an even amount of bytes.
16. (Previously presented) A system according to claim 1, wherein said second segment further comprises a parity field for storing parity calculated on the basis of the data package excluding the parity field.
17. (Previously presented) A system according to claim 1, wherein said transport layer comprises a ninth header field for a future extension comprising information required by a future transport layer protocol.

18. (Currently amended) A module of a communication system, the module being adapted—configured to transmit to and to receive from another module of the communication system a data package carrying a message, the module including a generator of a data link layer and a generator of a physical layer for encapsulating the message, wherein said data package is a block of data or a data packet or a datagram, the data package being composed of a sequence of bits arranged in fields, the fields being disposed in a plurality of layers constituting a layered structure,

wherein modules of the system are operable for the routing of the message carried by said data package, said data package comprising:

a physical layer having a first segment and a second segment encapsulating other ones of the layers in said layered structure, the physical layer serving to convey a bit stream through a network of said modules,

a data link layer comprising a data link layer control section for carrying data link layer control data and a data section for carrying data for said other layers, the data link layer being enclosed by the segments of said physical layer, and

a transport layer enclosed by the data link layer, the transport layer having a field for directing said routing, the transport layer defining a message in said data section, which message is configured according to a transport layer protocol and comprises:

a payload and a first header field for format of said payload,

a second header field for start of said payload in said message,

a third header field for length of said message,

a fourth header field for version of said transport layer protocol,

a fifth header field for message group identity establishing receiving resource format of said payload,

a sixth header field providing a message identity,

a seventh header field for identifying an object in the module, and

an eighth header field for sequencing a message relative to other messages.

19.-21. (Cancelled)

22. (Previously presented) A module having a data package according to claim 18, wherein said transport layer comprises a ninth header field for a future extension comprising information required by a future transport layer protocol.

23. (Previously presented) A receiver unit adapted to receive a data package from the module having the data package, according to claim 18.

24. (Previously presented) A transmitter unit comprising the module having the data package, and being adapted to transmit the data package according to claim 18.

25. (Previously presented) A method for establishing data communication between modules of a system via communication of a data package, wherein modules of the system are operable for the routing of a message carried by said data package through modules of the system, wherein said data package is a block of data or a data packet or a datagram, the data package being composed of a sequence of bits arranged in fields,

the fields being disposed in a plurality of layers constituting a layered structure, the method comprising:

transmitting from one module of the system to an other module of the system a data package carrying a message,

receiving at the one module of the system from the other module of the system a data package,

generating at the one module a data link layer and a physical layer for encapsulating the message, wherein said generating comprises:

providing in said data package said physical layer comprising a first segment and a second segment encapsulating other ones of the layers in said layered structure, the physical layer serving to convey a bit stream though a network of said modules,

providing in said data package said data link layer comprising a data link layer control section for carrying data link layer control data and a data section for carrying data for said other layers, the data link layer being enclosed by the segments of said physical layer, and

providing in said data package a transport layer enclosed by the data link layer, and inserting in the transport layer a field for directing said routing, the transport layer defining a message in said data section, which message is configured according to a transport layer protocol and comprises:

a payload and a first header field for format of said payload,

a second header field for start of said payload in said message,

a third header field for length of said message,
a fourth header field for version of said transport layer protocol,
a fifth header field for message group identity establishing receiving resource format of said payload,
a sixth header field providing a message identity,
a seventh header field for identifying an object in the module, and
an eighth header field for sequencing a message relative to other messages.

26. (Previously presented) A storage medium having therein a computer program comprising code for operating a data processor to establish data communication among a plurality of modules of a system, wherein modules of the system are operable for the routing of a message carried by a data package through modules of the system, wherein one of said modules contains said data processor and, in response to activation of said data processor by said program performs the operations of:

transmitting from said one module of the system to an other module of the system a data package carrying a message,
receiving at said one module of the system from the other module of the system a data package,
generating at said one module a data link layer and a physical layer for encapsulating the message,
communication by each of the plurality of modules of said data package, wherein said data package is a block of data or a data packet or a datagram, the data

package being composed of a sequence of bits arranged in fields, the fields being disposed in a plurality of layers constituting a layered structure,

providing in the data package a physical layer comprising a first segment and a second segment encapsulating other ones of the layers in said layered structure, the physical layer serving to convey a bit stream though a network of said modules,

providing in the data package a data link layer comprising a data link layer control section for carrying data link layer control data and a data section for carrying data for said other layers, the data link layer being enclosed by the segments of said physical layer, and

providing in said data package a transport layer enclosed by the data link layer, and inserting in the transport layer a field for directing said routing, the transport layer defining a message in said data section, which message is configured according to a transport layer protocol and comprises:

a payload and a first header field for format of said payload,

a second header field for start of said payload in said message,

a third header field for length of said message,

a fourth header field for version of said transport layer protocol,

a fifth header field for message group identity establishing receiving resource format of said payload,

a sixth header field providing a message identity,

a seventh header field for identifying an object in the module, and

an eighth header field for sequencing a message relative to other messages.